

SUPPLEMENTARY NOTES ON THE GENUS *BRACHYCOME* CASS.

DESCRIPTIONS OF FIVE NEW AUSTRALIAN SPECIES AND SOME NEW LOCALITY RECORDS.

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(20 Text-figures.)

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Synopsis.

Descriptions of the five new species are accompanied by figures designed to illustrate habit, vegetative features and fruits. Affinities and intraspecific variation are discussed in the text.

A number of new locality records are listed which extend the known range of several species for a considerable distance.

INTRODUCTION.

Knowledge of the distribution and natural variation of genera and component species is directly correlated with the activity of collectors, both amateur and professional. Within recent years a large number of specimens of the genus *Brachycome* Cass. have been received by the writer and, although the majority were referable to well known species, certain of them were quite distinct and are accordingly described as new species.

The range of several species is now known to be more extensive than was previously recorded (Davis, 1948, 1949), and these new records are now listed under the appropriate species. The present location of each specimen cited is indicated as in previous papers (Davis, 1948, 1949) with the following additions:

The Waite Institute, Adelaide	(WAI).
C.S. & I.R.O., Canberra	(C).
Parks and Gardens Herbarium, Canberra	(CP).

TAXONOMY.

COMPOSITAE. Tribe ASTEROIDEA.

BRACHYCOME Cass., *Dict. Sci. Nat.*, xxxvii (1825): 471.

Subgenus EUBRACHYCOME G. L. Davis.

Superspecies LEPTOCARPA.

BRACHYCOME ULIGINOSA, sp. nov.

(Text-figures 1-4).

Holotype: Heathland at eastern foot of Black Range, Western Grampians Region, Victoria, 2.11.1948, J. H. Willis (MEL). *Paratypes*: Two. *Loc. cit.* (MEL).

Herba perennis, glabra, 9-28 cm. alta; folia radicalia ad 6 cm. longa, 6 mm. lata, oblanceolata, acuta, aut integra aut interdum 1-4 lobis linearibus, in basi in petiolum gracilem fastigata; pedunculi robustiores, 1-3 linearibus phyllis; capitula 1-3, ligulis circiter 2.5 cm. expansis, involucri phylla circiter 22, 4.5 mm. longa, 1-1.5 mm. lata, subacuta-obtusa, linearia-anguste-ovata, integra; flores radii in speciem violacei, circiter 36, 5-7.5 mm. longi, 1-1.5 mm. lati; receptaculum 5 mm. latum, 2.5 mm. altum, hemisphaericum, non alte punctum; achaenia 1.8 mm. longa, 1.2 mm. lata, fusca, ovata, compressa; corpus leve et glabrum, ala angusta, crassa, integra et pilis margine minutis glandulosisque; pappus albis, simplicibus setis tam longis aut longioribus quam incisura intra alas.

Glabrous perennials 9-28 cm. high. *Leaves* radical, clustered, up to 6 cm. long, 6 mm. broad, oblanceolate, acute, entire or occasionally with 1-4 linear lobes; tapering proximally into a slender petiole. *Scape* rather robust, with 1-3 linear bracts. *Inflorescences* 1-3 to each plant, about 2.5 cm. across the expanded rays. *Involucral bracts* about 22, 4.5 mm. long, 1-1.5 mm. broad, subacute to obtuse, linear to narrow-ovate, entire. *Ray florets* apparently mauve, about 36, 5-7.5 mm. long, 1-1.5 broad.

Receptacle 5 mm. broad, 2.5 mm. high, hemispherical, shallowly pitted. *Fruits* 1.8 mm. long, 1.2 mm. broad, dark golden-brown, oval, flat; the body oblong, smooth and glabrous, sharply demarcated from the narrow, thick, entire wing which bears minute white glandular hairs along the margin. Pappus of white simple bristles equal to or slightly exceeding the notch between the wings.

Habitat: Swampy situations.

Range: Southern and western districts of Victoria.

Distribution: Eltham, 21.8.1903, P. R. H. St. John (MEL); Brisbane Ranges, 17 miles S.W. of Bacchus Marsh, 30.10.1943, J. H. Willis (MEL); Moyston, 10.1881, D. Sullivan (MEL); Mt. William Creek, 10.1879, D. Sullivan (MEL); Eastern foot of Black Range, near "The Pass", heathland swamp, 2.11.1948, J. H. Willis (MEL); Follett, 27.8.1905, F. M. Reader (MEL); Little Desert, 8 miles south of Lawloit and 2 miles east of Catiabrin Springs, swampy tracks, 11.9.1949, J. H. Willis (MEL); Wimmera, 1893, W. E. Matthews (MEL).

This species appears to be widely distributed in western Victoria, but due to the close vegetative resemblance to *B. scapigera* (Sieb. ex Spring) D.C. may well have been recorded as that species from other districts and even other States. Both species bear similar leaves and the base of the plant in each instance is surrounded by the fibrous remains of previous season's leaves. The only vegetative feature which distinguishes *B. uliginosa* from *B. scapigera* is the tendency in the former species for occasional leaves to bear a few linear lobes.

The fruits of *B. uliginosa* show certain similarities to both *B. radicans* Steetz ex Lehmann and *B. dissectifolia* G. L. Davis, and specimens from Moyston and Mt. William Creek were previously recorded as new records for the latter species (Davis, 1949). The relationship, however, is closest to *B. radicans*, from which the fruits can be distinguished by their oval body, and non-inflated thick wing.

B. radicans is widely distributed in swampy situations in eastern Australia and it is possible that both *B. uliginosa* of Victoria and *B. dissectifolia* of New England originated as geographic subspecies of *B. radicans*.

BRACHYCOME RARA, sp. nov.

(Text-figures 5-8.)

Holotype: Floodwaters of the Wilson River, western Queensland, 9.1922, W. MacGillivray. (WAI. 8118.) *Paratypes*: Two. *Loc. cit.* (WAI. 8140.)

Herba in speciem annua, circiter 10 cm. alta aut altior, a basi ramosissima et mic. glandulosa; folia caulina ad 4 cm. longa, 1 cm. lata, lanceolata, sessilia, integra, acuta; pedunculi axillares et terminales, graciles, aut nudi aut uno parvo filio; capitula circiter 35, ligulis diametro 1.3 cm. expansis; involucri phylla 22, 3.5 cm. longa, 1.1-1.5 mm. lata, oblanceolata, subacuta-obtusa, mic. glandulosa et fimbriato-ciliata; fiores radii circiter 24, 4 mm. longi, 1.2 mm. lati, probabiliter caerulei; receptaculum 2 mm. latum, 1.5 mm. altum, hemisphaericum; achaenia 1-1.2 mm. longa, 0.6-0.8 mm. lata, cuneata, compressa, rubida; latus utrumque gibbus fuscum longum, utrimque longo sinu, habet; margines crassae et teretes sunt; pappus mic. ora est.

An apparently annual plant about 10 cm. high or higher, much branched from the base and microscopically glandular all over. Cauline leaves up to 4 cm. long, 1 cm. broad, lanceolate, sessile, entire, acute. *Peduncles* axillary and terminal, slender, naked or with a single small leaf. *Inflorescences* about 35, 1.3 cm. diameter across the expanded rays. *Involucral bracts* 22, 3.5 cm. long, 1.1-1.5 mm. broad, oblanceolate, subacute to obtuse, microscopically glandular and torn ciliate. *Ray florets* about 24, 4 mm. long, 1.2 mm. broad, probably blue. *Receptacle* 2 mm. broad, 1.5 mm. high, hemispherical. *Fruits* 1-1.2 mm. long, 0.6-0.8 mm. broad, cuneate, flattened, reddish-brown, with a raised dark-brown protuberance running vertically on each face, bordered on either side by a longitudinal fold; margins thick and rounded. Pappus represented by a microscopic rim.

Range: Only known from the type locality.

Specimens examined: Type series only.



Text-figures 1-20.

- 1-4, *B. uliginosa*.—1, Habit $\times \frac{1}{4}$; 2, Leaf variation $\times \frac{1}{4}$; 3, Fruit $\times 12$; 4, Distribution.
 5-8, *B. rara*.—5, Habit $\times \frac{1}{4}$; 6, 7, Fruit, front and side views $\times 12$; 8, Distribution.
 9-13, *B. gracilis*.—9, Habit $\times \frac{1}{4}$; 10, 11, 12, Fruit, side, front and back views, $\times 12$;
 13, Distribution.
 14-17, *B. riparia*.—14, Habit $\times \frac{1}{4}$; 15, 16, Variation in Fruits $\times 12$; 17, Distribution.
 18-20, *B. Eyrensis*.—18, Habit $\times \frac{1}{4}$; 19, Fruit $\times 12$; 20, Distribution.

The fruits of this species are unique in their possession of a dark projecting longitudinal ridge on the centre of each face. No similar structure has been seen in any other species, but the pad-like confluent tubercles on the fruits of *B. Whitei* G. L. Davis suggest its origin from a structure of this nature. The thick margin-like wing can only be seen to advantage in the mature fruits, following the development of the longitudinal folds which demarcate the body.

Since this species has never been collected before, it is possible that it makes its appearance only after heavy rain when the country is under flooded conditions and collectors are unlikely to be in the area.

BRACHYCOME GRACILIS, SP. NOV.

(Text-figures 9-13.)

Holotype: Mt. Major, Dacite outcrop near Dookie, Victoria, 28.10.1953, A. Tylee (MEL). *Paratypes*: Five. *Loc. cit.*; in sandy loam at Mt. Major, 6.11.1949, A. S. Forgas (MEL).

Herba annua, gracilis, pilis paucis-multis, ad 9 cm. alta, a basi ramosa; folia caulina 1-1.8 cm. longa, pinnatipartita, in basi fastigata; partes 5, lineares, 2 mm. longae, 1 mm. latae, acutae; pedunculi filiformes, terminales; capitula ligulis diametro 2 cm. expansis, maturitate diametro 5-6 mm., hemisphaerica; involucri phylla 9-13, 2.5-3 mm. longa, 1.5 mm. lata, rhombata, acuta, mic. fimbriato-ciliata et glandulosa; flores radii 8-12, ligulis albis, 4 mm. longis, 1.5 mm. latis; receptaculum 1 mm. latum, 1 mm. altum, acute conicum, altius punctum; achaenia 1.5-1.7 mm. longa, 1 mm. lata, nigra, cuneata, in ultima parti valde curvata; corpore ab crassis, rigidis marginibus, quae modo sinuum supra pappi basim pro-currunt, inclare secto; pappus albus, conspicuus, non stellatus, setis simplicibus.

Slender sparsely septate-hairy annuals, up to 9 cm. high, branching from the base. *Leaves* cauline, 1-1.8 cm. long, pinnatipartite, tapering proximally; segments five, linear, 2 mm. long, 1 mm. broad, acute. *Peduncles* filiform, terminal. *Inflorescences* 1 cm. diameter across the expanded rays. *Infructescences* 5-6 mm. diameter, hemispherical. *Involucral bracts* 9-13, 2.5-3 mm. long, 1.5 mm. broad, rhomboidal, acute, microscopically torn-ciliate and glandular. *Ray florets* 8-12; the rays white, 4 mm. long, 1.5 mm. broad. *Receptacle* 1 mm. broad, 1 mm. high, steeply conical, rather deeply pitted. *Fruits* 1.5-1.7 mm. long, 1 mm. broad, black, cuneate, strongly curved distally; central body inconspicuously demarcated from the thick rigid margins which extend upwards as curved folds above the point of insertion of the pappus. Pappus white, conspicuous, not stellate, the bristles simple.

Range: Only known from the type locality.

Specimens examined: Type series only.

All specimens examined have the same slender appearance and are probably ephemeral, the whole life cycle being completed during spring. Although this species has only been collected from the type locality, it is possible that its actual distribution is more extensive and that previously flowering plants have been referred to *B. goniocarpa* Sond. et F. Muell., with which there is a close resemblance vegetatively and in the young fruits. The mature fruits, however, are strongly curved through the development of a thick wing and an affinity with *B. campylocarpa* J. M. Black is indicated.

BRACHYCOME RIPARIA, SP. NOV.

(Text-figures 14-17.)

Holotype: Snowy River, east of Butcher's Ridge, "in crevices and amongst porphyry rocks, below flood level", 22.1.1954; N. A. Wakefield, No. 4804 (MEL). *Paratypes*: Three. *Loc. cit.* (MEL.)

Herba perennis, ramosissima, aut erecta aut ascendens, ad 36 cm. alta, indumento mic. glanduloso; folia multa, caulina, cuneata, inferiora ad 35 cm. longa, 7 dentibus acutis et petiolo gracili, superiora minora et postremo sessilia; pedunculi plerumque graciles, 1-2 foliis filiformibus; capitula plurima, ligulis diametro ad 1.5 cm. expansis; involucri phylla 18-22, 4 mm. longa, 0.6-0.8 mm. lata, linearia, acuminata, mic. fimbriato-